Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A multi-mode radio module ~~(22) comprising~~ comprising:

a terminal ~~(11)~~ for connection to signal propagating and receiving means ~~(10)~~,

a transmitting branch ~~(DCS/PCS)~~ coupled to the terminal, and

a branching circuit coupled to the terminal, the branching circuit comprising at least a first and a second branch for receiving signals in first and second frequency bands ~~(DCS/PCS)~~, respectively, each of the first and second branches ~~comprising, respectively,~~ comprising:

a phase shifting circuit, wherein the phase shifting circuit has an input terminal and an output terminal, the input terminal of the phase shifting circuit being coupled to the terminal, ~~(PS1/PS2),~~

a band pass filter ~~(RXF2,RXF3)~~ coupled to the output terminal of the phase shifting circuit, the bandwidth of the filter being selected to pass a wanted signal in one of the first and second frequency bands but reject an unwanted signal in the other of the second and first frequency bands, and

a low noise amplifier ~~(LNA2,LNA3)~~ coupled to an output of the band pass filter ~~(RXF2,RXF3)~~,

wherein ~~each of the phase shifting circuits (PS1,PS2) is impedance transforming from a lower impedance to a higher impedance~~ the phase shifting circuit has input impedance and output impedance, the input impedance being smaller than the output impedance, the input impedance being applied to the terminal through the input terminal of the phase shifting circuit, the output impedance being applied to the band pass filter through the output terminal of the phase shifting circuit.

2. (currently amended) A radio module as claimed in claim 1, wherein each of the band pass filters ~~(RXF2,RXF3)~~ is a Bulk Acoustic Wave ~~BAW~~ filter.

3. (currently amended) A radio module as claimed in claim 1, wherein each of the band pass filters ~~(RXF2,RFX3)~~ is a Surface Acoustic Wave ~~SAW~~ filter.

4. (currently amended) A radio module ~~(22)~~ as claimed in claim 1, wherein each of the phase shifting circuits, ~~circuit, (PS1,PS2)~~ comprises a series capacitance and a shunt inductance, the values of the series capacitance and the shunt inductance being such as to provide a predetermined impedance transformation between that of the signal propagating and receiving means and the respective band pass filter ~~(RXF2,RXF3)~~.

5. (currently amended) A radio module as claimed in claim 1, wherein the branching circuit is coupled to the terminal by way of a length of transmission line ~~(TXL2)~~.

6. (currently amended) A radio module as claimed in claim 5, wherein the transmitting branch ~~(DCS,PCS)~~ has a series switch ~~(SW3)~~ coupled to the terminal ~~(11)~~ and the branching circuit has a shunt switch ~~(SW5)~~ coupled to an end of the transmission line ~~(TXL2)~~ remote from the terminal.

7. (currently amended) A radio module as claimed in claim 1, wherein a duplexer ~~(12)~~ is coupled to the terminal ~~(11)~~, in that the transmitting and the branching circuit are coupled to a port of the duplexer for passing signals having frequencies lying in a first bandwidth and in that a further port is coupled to a further branch for processing signals having frequencies lying in a second bandwidth.

8. (currently amended) A multi-mode radio ~~comprising~~ comprising:

signal propagating and receiving means ~~(10)~~,

means for modulating signals to be transmitted,

means for demodulating received signals and

a multi-mode radio module ~~(22)~~, wherein the multi-mode radio module comprises: ~~comprising~~

a transmitting branch ~~(DCS/PCS)~~ coupled to the signal propagating and receiving means, the modulating means being coupled to a signal input of the transmitting branch, and

a branching circuit coupled to the signal propagating and receiving means, the branching circuit comprising at least a first and a second branch for receiving signals in first and second frequency bands, respectively, each of the first and second branches ~~comprising, respectively,~~ comprising:

a phase shifting circuit, wherein the phase shifting circuit has an input terminal and an output terminal, the input terminal of the phase shifting circuit being coupled to the terminal, ~~(PS1,PS2),~~

a band pass filter ~~(RXF2,RFX3)~~ coupled to the output terminal of the phase shifting circuit, the bandwidth of the filter being selected to pass a wanted signal in one of the first and second frequency bands but reject an unwanted signal in the other of the second and first frequency bands, and

a low noise amplifier ~~(LNA2,LNA3)~~ coupled to an output of the band pass filter, the respective low noise amplifiers being coupled to the demodulating means,

wherein ~~each of the phase shifting circuits (PS1,PS2) is impedance transforming from a lower impedance to a higher impedance~~ the phase shifting circuit has input impedance and output impedance, the input impedance being smaller than the output impedance, the input impedance being applied to the terminal through the input terminal of the phase shifting circuit, the output impedance being applied to the band pass filter through the output terminal of the phase shifting circuit.

9. (currently amended) A radio as claimed in claim 8, wherein each of the phase shifting circuits ~~(PS1,PS2)~~ comprises a series capacitance and a shunt inductance, the value of the series capacitor and the shunt inductance being such as to provide a predetermined

impedance transformation between that of the signal propagating and receiving means and the respective band pass filter ~~(RXF2,RXF3)~~.

10. (currently amended) A radio as claimed in claim 9, wherein the transmitting branch has a series switch ~~(SW3)~~ coupled to the terminal ~~(11)~~ and the branching circuit has a shunt switch ~~(SW5)~~ coupled to one end of a quarter wavelength transmission line ~~(TXL2)~~, the other end of the transmission line being coupled to the terminal.

11. (currently amended) A radio as claimed in claim 8, wherein a duplexer ~~(12)~~ is coupled to the terminal, in that the transmitting and the branching circuit are coupled to a port of the duplexer for passing signals having frequencies lying in a first bandwidth and in that a further port is coupled to a further branch for processing signals having frequencies lying in a second bandwidth.

12. (new) A radio module as claimed in claim 1, wherein the branching circuit is coupled to the terminal through a transmission line, the input impedance of each of the phase shifting circuits being matched to impedance of the transmission line, the output impedance of each of the phase shifting circuits being matched to impedance of a band pass filter, the band pass filter and the phase shifting being in the same branch.

13. (new) A radio module as claimed in claim 12, wherein the input impedance of each of the phase shifting circuits is 50 Ω.

14. (new) A radio module as claimed in claim 12, wherein the transmission line is a quarter wavelength transmission line.

15. (new) A radio module as claimed in claim 1, wherein the branching circuit has a PIN diode, the anode of the PIN diode being coupled to one end of a transmission line, the other end of the transmission line being coupled to the terminal.

16. (new) A radio as claimed in claim 8, wherein the branching circuit is coupled to the terminal through a transmission line, the input impedance of each of the phase shifting circuits being matched to impedance of the transmission line, the output impedance of each of the phase shifting circuits being matched to impedance of a band pass filter, the band pass filter and the phase shifting being in the same branch.

17. (new) A radio as claimed in claim 16, wherein the input impedance of each of the phase shifting circuits is 50 Ω.

18. (new) A radio as claimed in claim 8, wherein the branching circuit has a PIN diode, the anode of the PIN diode being coupled to one end of a transmission line, the other end of the transmission line being coupled to the terminal.